Statistical Bulletin

METROPOLITAN LIFE INSURANCE COMPANY

Volume 33 JULY 1952 *Number 7*

The Five Leading American Cities

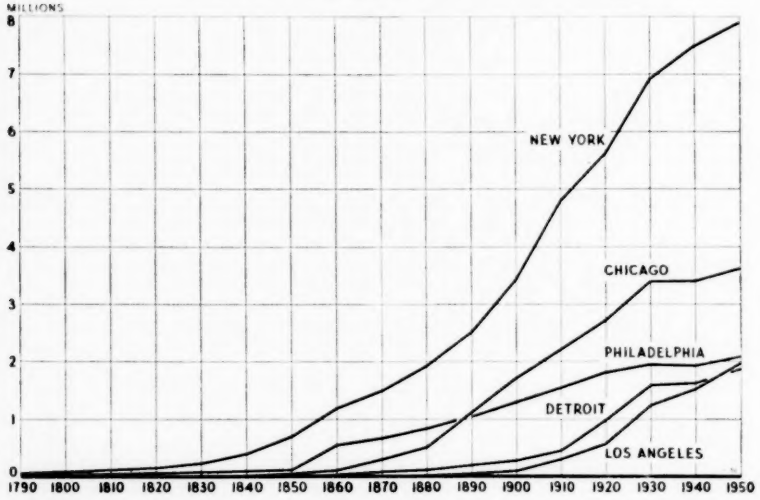
ONE out of every five people in the United States lives in or near one of the five largest cities. New York, Chicago, Philadelphia, Los Angeles, and Detroit, together with their surrounding areas, had more than 29,000,000 inhabitants at the time of the 1950 Census—a greater number than our total population a century earlier. The five cities themselves had a combined population of 17,400,000 in 1950, or one ninth of the country's total. The populations of these cities, since their earliest enumerations, are shown in the chart on the next page.

Ever since the first census, in 1790, New York has been our most populous city. With its nearly 8,000,000 residents, New York far outranks even its nearest rival, Chicago, which has less than half as many inhabitants. Even so, Chicago has had an extraordinary history of growth, particularly toward the second half of the last century, when our population was pushing westward. In the 50 years from 1840 to 1890 Chicago grew from a town of about 4,500 to a metropolis of nearly 1,100,000, displacing Philadelphia as the second largest city in the United States. Since then the city has tightened its grip on second place, doubling its population in the 20 years between 1890 and 1910 and reaching a total of more than 3,600,000 in 1950.

Detroit is another Midwestern city which has forged ahead to take its place among the "big five." While its early growth was not as rapid as Chicago's, by 1900 Detroit was the 13th largest city in the United States, with a population of 286,000. But its greatest numerical increase came with the rise of the automobile industry. In the first decade of the present century the population of the city increased by 180,000; in the second decade, by 528,000; and in the third, by 575,000. Detroit rose in rank to ninth place in 1910 and to fourth in 1920, retaining that position until 1950, when Los Angeles preempted it.

Of the five cities under review, Los Angeles has experienced the greatest relative increase in population in the past 50 years. In 1900 Los Angeles was barely past the 100,000 mark; by 1950 it was virtually in the 2,000,000 class. In the decade of the 1920's its population more than doubled, so that by 1930 it was among the first five American cities, with a population of about

Population of American Cities With More Than 1,000,000 Residents in 1950 1790 to 1950



1,240,000. Los Angeles is still growing rapidly; between 1940 and 1950 its population increased 31 percent. If this rate of growth continues, Los Angeles will soon overtake Philadelphia and become the third largest city in the United States.

As the foregoing discussion suggests, the cities included among the top five have changed from time to time in the course of our history. Only two cities—New York and Philadelphia—have been among the leaders consistently. Providence ranked fifth at the time of our earliest censuses but was soon outranked by more-rapidly growing cities. Boston, Baltimore, and New Orleans were among the five leading cities throughout the greater part of the 1800's. St. Louis had that distinction for about a half century following the Civil War. More recently, Cleveland was in fifth place at one census (1920).

It is not likely that the present composition of our leading cities will change for some time. Detroit, our fifth largest city, has almost twice as many people as the next in line, Baltimore. Although the latter may reach a population of 1,000,000 or more by 1960, there is little prospect that it will overtake Detroit.

In the past decade the areas near and around the largest cities have had a much greater rate of population growth than the cities themselves. As the table shows, the surrounding areas increased from more than twice to nearly five times as rapidly as the cities. The relative gain around New York was materially less than that in the areas sur-

POPULATION INCREASE IN THE FIVE LARGEST CITIES OF THE UNITED STATES AND IN THE REMAINDER OF THEIR STANDARD METROPOLITAN AREAS*
1940 TO 1950

City	POPULATION				PERCENT INCREASE	
	City		Remainder of Metropolitan Area		City	Remainder of Metropolitan Area
	1950	1940	1950	1940		
New York....	7,891,957	7,454,995	5,020,037	4,205,844	5.9	19.4
Chicago.....	3,620,962	3,396,808	1,874,402	1,428,719	6.6	31.2
Philadelphia..	2,071,605	1,931,334	1,599,443	1,268,303	7.3	26.1
Los Angeles...	1,970,358	1,504,277	2,397,553	1,412,126	31.0	69.8
Detroit.....	1,849,568	1,623,452	1,166,629	753,877	13.9	54.8

*A standard metropolitan area consists, in general, of a county which contains at least one city of 50,000 or more residents and of contiguous counties considered to be economically integrated with that city.

Source: Bureau of the Census, *Population of Standard Metropolitan Areas and Cities of 50,000 or More, by Color: 1950 and 1940.* Series PC-14, No. 1, Dec. 19, 1951.

rounding the other cities, but even there it amounted to almost 20 percent. Around Detroit the increase was 55 percent, and in the area around Los Angeles it was as much as 70 percent.

Improvement in Mortality Among the Aged

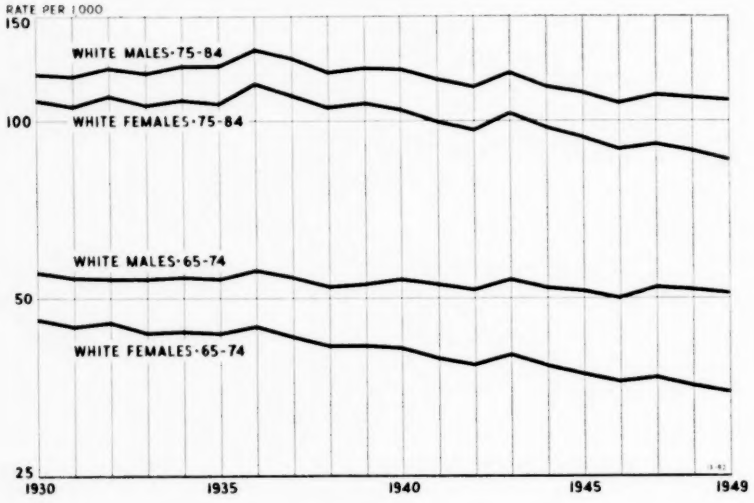
THE spectacular reductions in mortality at the earlier ages of life have tended to obscure the appreciable improvement that has occurred in old age. In less than 20 years, from 1930 to 1949, the death rate for white women in the United States fell 25 percent at ages 65-74 years and 20 percent at 75-84 years. Although the record is not as favorable for white men at the advanced ages, the decreases in mortality among them have been far from negligible, as may be seen in the chart on page 4.* Particularly significant is the fact that in each sex virtually all the gains have been made since 1936—that is, in the period immediately following the introduction and development of the sulfa drugs and subsequently of the antibiotics.

Further insight into the trend of mortality in old age is gained from the course of the death rate from the leading causes—the principal cardiovascular-renal diseases, cancer, pneumonia and influenza, and accidents,

*Later data available for the Industrial policyholders of the Metropolitan Life Insurance Company past age 65 indicate that for white women the reductions in mortality have continued through 1951, while for the men the death rates have shown no definite upward or downward movement.

Death Rates per 1,000 from All Causes
White Males and White Females at Ages 65 to 74 and 75 to 84
United States, 1930-1949

(Semilogarithmic Chart)



which together now account for more than four fifths of all deaths among white persons in the age range 65-84.

The sharp reduction in the mortality from pneumonia and influenza gives dramatic testimony to the efficacy of the revolutionary advances made in the treatment of the respiratory infections. At ages 65-74 the death rate from pneumonia and influenza dropped 60 percent among white men and 73 percent among white women in the period from 1930 to 1948, the latest year for which comparable data are available; even at ages 75-84 the reductions were 51 and 64 percent, respectively. The details appear in the accompanying table.

For the cardiovascular-renal diseases, which dominate the mortality picture at the advanced ages, the outstanding feature is the lower level of the death rate in the postwar years, during which period the antibiotics came into widespread use. The recent improvement has been especially large among the women. As a result, the excess in male mortality from these diseases has increased materially. For example, whereas the death rate at ages 65-74 was 20 percent higher for males than for females in 1930, the difference was 50 percent in 1948.

The trend of mortality from cancer shows an even greater sex difference: For white men the trend

has been definitely upward since 1930 in the age range 65-84; for white women, however, an improvement is evident in the death rate at 65-74 years; at ages 75-84 the rates have been fairly stable. In the period under review, considerable progress has been made in reducing the death toll from accidents among old people in each sex.

It appears likely that further progress will be made in reducing the general death rate among the aged in our country. For one thing, the control already achieved over the infectious diseases ensures that in the years to come a decreasing proportion of people entering the older ages will have serious organic impairments of infectious origin. At the same time, medical care and public health facilities are improving in quality and are spreading into all areas of the country; official and private health agencies are giving added support to health education, community programs, and medical research; and the rapid growth of voluntary hospital, surgical, and medical-care insurance is encouraging larger numbers of people to give early attention to their ailments, when they are generally most amenable to treatment.

All these developments will help men and women to survive to extreme old age. This means, of course, that the problems of our aging population will become more intensive and challenging.

DEATH RATES PER 100,000 FROM LEADING CAUSES AT AGES 65 TO 74 AND 75 TO 84. WHITE PERSONS BY SEX UNITED STATES, 1930-1948

Year	Ages 65-74					Ages 75-84				
	All Causes	Cardio-vascular-renal	Cancer	Pneumonia and Influenza	Accidents	All Causes	Cardio-vascular-renal	Cancer	Pneumonia and Influenza	Accidents
	White Males									
1930	5,512	2,999	702	342	249	11,921	7,019	1,088	819	445
1935	5,352	2,931	726	342	241	12,271	7,288	1,249	868	487
1940	5,373	3,099	756	239	222	12,144	7,421	1,314	717	468
1945	5,127	3,013	776	165	207	11,066	6,798	1,346	472	441
1946	4,999	2,920	788	150	203	10,655	6,573	1,345	448	420
1947	5,198	3,055	813	156	202	10,976	6,806	1,384	443	419
1948	5,154	3,043	825	137	193	10,872	6,735	1,424	399	416
	White Females									
1930	4,602	2,502	690	319	151	10,756	6,299	1,028	863	534
1935	4,336	2,345	692	299	149	10,663	6,356	1,104	860	546
1940	4,125	2,336	672	193	140	10,422	6,467	1,074	660	538
1945	3,719	2,148	657	110	116	9,360	5,882	1,078	386	488
1946	3,614	2,068	659	108	112	8,944	5,701	1,057	369	452
1947	3,649	2,096	661	100	113	9,086	5,771	1,077	366	456
1948	3,544	2,019	664	85	111	8,880	5,622	1,091	312	447

NOTE: Death rates are not shown for 1949 because changes in classification of causes of death in that year have disturbed the comparability of the figures with those for earlier years.

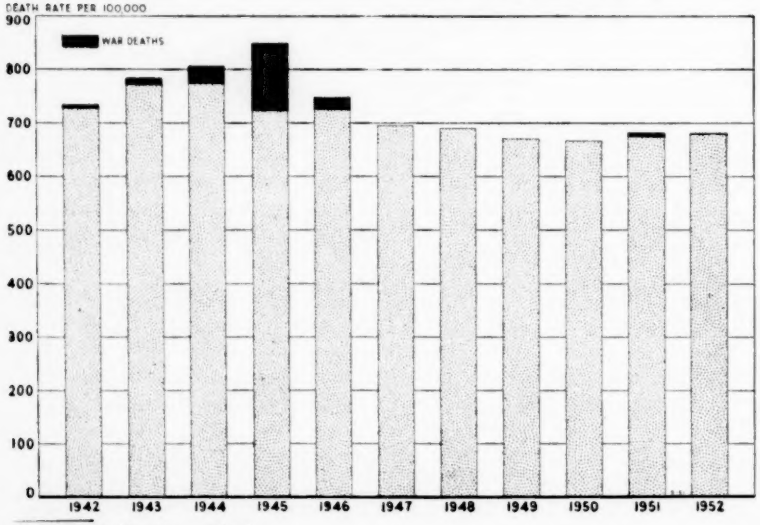
Mortality Low in Industrial Population

FOR the first half of 1952 the death rate among the Industrial policyholders of the Metropolitan Life Insurance Company was slightly lower than that in the like part of last year. The two rates are 680 and 685 per 100,000, respectively, and compare with 667 in 1950, when the mortality reached an all-time low for this period of the year.

The record for white females is extraordinarily good, their death rate dropping to a new minimum in 1952. They register lower rates than a year ago at every age group except 5-14 years; compared with 1950, the rate has decreased at every age without exception, as may be seen in the table on page 7. For white male policyholders the death rate in the aggregate is about the same as last year. Material declines, however, have been recorded at the main military ages, as a result of the generally decreased tempo of the war in Korea. Nevertheless, the death rate among men in the age range 15-24 years is still from 30 to 50 percent higher than in 1950, prior to the outbreak of the conflict.

Among the favorable features of the current record are the appreciable declines in mortality from pneumonia and influenza, tuberculosis, diabetes, and syphilis. For tuberculosis, the death rate in the first half of the year reached a new low of 16.1 per 100,000, compared with 18.6

Mortality From All Causes, All Ages. January through June, 1942-1952
Metropolitan Life Insurance Company, Industrial Premium-Paying Business*



*Weekly and Monthly combined.

DEATH RATES PER 100,000 FROM ALL CAUSES. WHITE PERSONS BY SEX AND AGE PERIODS. METROPOLITAN LIFE INSURANCE COMPANY INDUSTRIAL PREMIUM-PAYING BUSINESS—WEEKLY AND MONTHLY COMBINED FIRST SIX MONTHS OF 1952, 1951, AND 1950 COMPARED

AGE PERIOD (YEARS)	DEATH RATE PER 100,000						PERCENT CHANGE: 1952 SINCE YEAR INDICATED			
	WHITE MALES			WHITE FEMALES			WHITE MALES		WHITE FEMALES	
	1952	1951	1950	1952	1951	1950	1951	1950	1951	1950
Under 75.....	724.2	723.2	698.0	524.6	527.4	530.6	+ *	+ 4	— 1	— 1
Under 5....	218.3	199.9	218.4	164.5	173.7	173.0	+ 9	— *	— 5	— 5
5 to 9....	47.6	58.1	55.2	40.9	39.2	42.6	—18	—14	+ 4	— 4
10 to 14....	55.9	48.1	56.2	31.2	30.0	38.9	+16	— 1	+ 4	—20
15 to 19....	113.1	149.8	88.0	43.8	49.0	50.8	—24	+29	—11	—14
20 to 24....	195.2	215.5	130.4	58.1	64.9	66.4	— 9	+50	—10	—13
25 to 34....	186.2	179.1	176.8	95.4	101.1	104.2	+ 4	+ 5	— 6	— 8
35 to 44....	427.4	437.4	433.2	216.6	231.7	245.9	— 2	— 1	— 7	—12
45 to 54....	1,151.6	1,147.6	1,153.0	573.0	595.3	601.4	+ *	— *	— 4	— 5
55 to 64....	2,632.3	2,695.9	2,698.3	1,401.9	1,432.8	1,475.8	— 2	— 2	— 2	— 5
65 to 74....	5,875.1	5,897.6	5,834.0	3,761.8	3,873.8	3,973.8	— *	+ 1	— 3	— 5

*Less than 0.5 percent.

a year ago and with 22.0 in 1950. The rate is now no more than half that only five years ago. Similarly, the mortality from pneumonia and influenza, as a group, shows a downward trend, reflecting the effectiveness of antibiotic therapy. In the January-June period, the death rate from these diseases was 21.8 per 100,000, or 9 percent below the rate last year.

Several of the childhood diseases have been more prevalent this year than last. This is a "measles year," with well over 600,000 cases reported in the general population of the United States during the first six months. Yet, the measles death rate in this insurance experience increased only from 0.3 per 100,000 a year ago to 0.4 this year, indicating how successful are the newer methods of treating the disease. Considerably more cases of scarlet fever and streptococcal sore throat have also been reported, but the number of deaths from these conditions has increased very slightly. All told, the death rate from the four principal communicable diseases of childhood, including diphtheria and whooping cough, is only 0.7 per 100,000 policyholders, as against 0.6 in the January-June period of 1951. The sharp rise in the number of cases of acute poliomyelitis reported in June has not yet affected the mortality record. For the first half of the year the

death rate from this cause among the insured was 0.2 per 100,000, which is a shade under the figure for the two preceding years.

The cardiovascular-renal diseases, which account for more than half of the mortality from all causes combined, recorded a small decline, to 351.9 per 100,000 from 354.6 a year ago. The malignant neoplasms, on the other hand, showed a slight rise in mortality.

The death toll from accidents is somewhat higher this year than last. Part of this rise is attributable to the increase in motor vehicle accident fatalities. The other external causes of death—suicide, homicide, and war deaths—register a lower death rate than a year ago. For the first six months of 1952 the rate from war deaths (enemy action) was 2.3 per 100,000; in the corresponding period of 1951 it was 6.7.

The Statistical Bureau of the Metropolitan Life Insurance Company keeps a current record of catastrophes—accidents in which five or more persons are killed. The facts for the general population of the United States, compiled from a variety of sources, are here briefly summarized for the first six months of the year.

Catastrophic accidents have been responsible for a considerably higher death toll than a year ago. Approximately 900 lives were lost in such mishaps up through June, an increase of nearly 25 percent over the figure for the like period of 1951. The rise reflects the heavy loss of life resulting from the series of tornadoes which swept through six Mississippi Valley States during the week end of March 22. These storms alone accounted for 229 deaths, or for about one quarter of all catastrophic fatalities in the first six months of the year. The number of deaths from catastrophes involving conflagrations in dwellings and apartments likewise has been substantially higher this year than last.

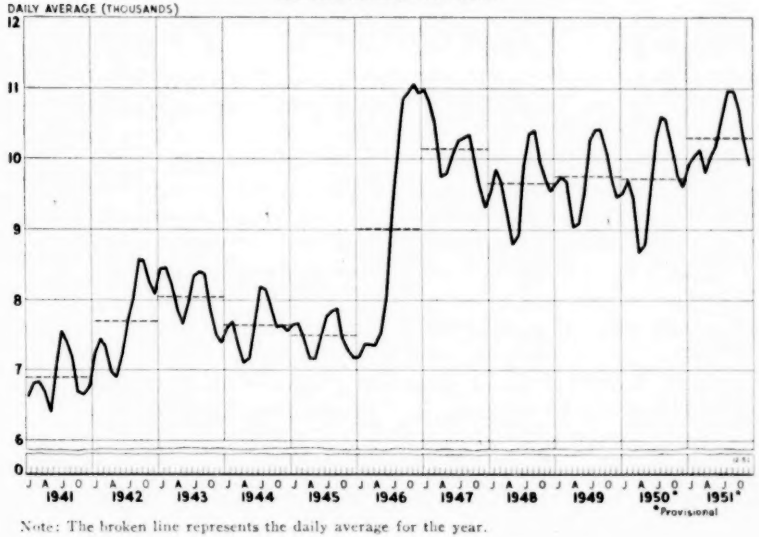
On the other hand, the death toll in aviation has decreased materially. So far in 1952 there have been three air transportation catastrophes in which 25 or more lives were lost. Two of them involved scheduled passenger planes which crashed at Elizabeth, N. J.—one in January killing 30 people and the other in February taking 33 lives. The third air disaster was a nonscheduled transport plane accident near Los Angeles, in April, which took 29 lives. As compared with the two scheduled air-transportation catastrophes this year, accounting for 63 deaths, there were seven such accidents in the first half of 1951, with a death toll of 159. It is also worthy of note that the number of fatalities sustained in railroad catastrophes is considerably lower than a year ago.

The Seasonal Pattern of Births

DURING the year, births in our country usually rise and fall in number in a regular seasonal pattern. In general, births are most frequent in August or September and then decrease in succeeding months until they reach a low point in April or May of the following year. The decline during the winter and spring, however, is normally interrupted by a minor peak in February or March, but this is well below the maximum that occurs in the late summer.

In the past decade or so deviations from the usual seasonal pattern of births have not been infrequent, reflecting the impact of World War II on marriage and family life generally. The facts are illustrated in the chart below, which shows the average daily number of births in each month of the period 1941-1951. In 1942 there was an unusually high peak in September and October, the result of conceptions which occurred shortly after the United States entered the war. In 1943 births were highest in January and February rather than in the late summer, as is ordinarily the case. Another wide departure from the general pattern is found in the first postwar year, 1946, when the daily average number of births rose from a low at the beginning of the year to an unusually high peak in November. This was a consequence of the return of servicemen to civilian life immediately after the close of

Daily Average Number of Births in Each Month
United States, 1941-1951


DAILY AVERAGE (THOUSANDS)
12
11
10
9
8
7
6
0
J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O J A J O
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950*
1951*
*Provisional

Note: The broken line represents the daily average for the year.

DAILY AVERAGE BIRTHS IN THE MONTH AS PERCENT OF DAILY AVERAGE IN THE PERIOD 1948-1949, BY GEOGRAPHIC DIVISIONS

Month	United States	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
January	98.8	97.4	96.5	97.3	98.6	101.2	103.8	103.7	95.8	95.1
February	101.0	100.6	100.6	100.9	101.2	102.7	105.5	101.0	97.7	96.7
March	99.8	104.3	102.5	100.7	100.5	99.6	100.7	91.7	99.4	98.4
April	94.2	99.8	97.6	96.0	92.6	92.9	93.1	81.1	98.9	97.7
May	92.0	97.0	96.0	92.0	87.6	92.2	88.8	80.1	99.3	99.2
June	95.0	98.4	97.3	94.0	93.3	93.2	93.5	89.3	99.5	101.2
July	104.1	104.3	103.8	103.9	105.3	103.2	104.0	106.3	104.8	102.4
August	107.0	102.5	103.9	107.2	109.0	106.7	106.9	115.3	105.4	105.0
September	107.4	103.9	104.6	107.4	107.9	107.8	107.0	115.4	104.1	105.9
October	102.9	100.6	102.2	103.2	104.3	102.2	101.0	108.9	100.1	100.9
November	99.9	96.4	98.8	100.0	101.4	99.6	98.1	104.9	98.0	99.6
December	97.9	94.7	96.4	97.5	98.3	98.8	97.7	102.1	96.8	97.8

hostilities. The seasonal distribution was still abnormal in 1947, more births being recorded in the first quarter than in the third quarter of the year. But with the return of fairly normal conditions the traditional pattern was reestablished in 1948-1950.

The outbreak of the Korean war in June 1950 has also had an effect, though a minor one, on the yearly cycle of births. Their number in April and May 1951 was much higher than it would have been ordinarily. These babies were conceived in July and August 1950, shortly after the beginning of hostilities. In the first quarter of 1952 the seasonal variation of births was still abnormal.

Although the high and low points in births occur at about the same times of the year throughout most of the United States, there are wide geographic differences in the extent to which these variations depart from the yearly average. The details for each geographic division are shown in the table above. The smallest variations occur in the Middle Atlantic States where, in 1948-1949, the daily average number of births for the high month—September—was only 9 percent above that for the low month—May. In sharp contrast is the situation in the West South Central States. In this region, which comprises Texas, Oklahoma, Louisiana, and Arkansas, the daily average in September was 44 percent higher than that in May. In general, the differences between high and low are least in the Northeast and the West and greatest in the South. The North Central States generally show moderate variations between the maximum and minimum months.

In the West the seasonal variation in births is somewhat different from that prevailing in other sections of the country. While the high months are still August and September, the low months are January and February, rather than April and May. Furthermore, the difference between the maximum and minimum is relatively small in the Mountain and Pacific States, amounting to only 11 percent in 1948-1949.

DEATH RATES* PER 100,000 POLICYHOLDERS FROM SELECTED CAUSES
INDUSTRIAL PREMIUM-PAYING BUSINESS, *Weekly and Monthly Combined*
METROPOLITAN LIFE INSURANCE COMPANY
June 1952

CAUSE OF DEATH	ANNUAL RATE* PER 100,000 POLICYHOLDERS				
	JUNE		JANUARY-JUNE		
	1952	1951	1952	1951	1950
ALL CAUSES—TOTAL	616.7	605.8	680.1	685.1	667.0
Tuberculosis (all forms)	12.2	17.1	16.1	18.6	22.0
Tuberculosis of respiratory system	11.0	15.1	14.7	16.9	20.0
Syphilis	2.5	2.8	2.9	4.1	4.2
Communicable diseases of childhood	.5	.9	.7	.6	.8
Acute poliomyelitis	.2	.1	.2	.3	.3
Malignant neoplasms	117.3	112.7	122.8	121.8	119.1
Diabetes mellitus	13.5	15.0	14.3	16.5	15.4
Diseases of the cardiovascular-renal system	314.4	299.1	351.9	354.6	347.9
Vascular lesions, central nervous system	61.3	60.8	71.8	67.7	67.6
Diseases of heart	229.4	216.7	254.6	260.0	252.0
Chronic rheumatic heart disease	13.0	12.6	14.0	14.8	14.4
Arteriosclerotic and degenerative heart disease	166.0	157.6	185.6	189.1	180.1
Hypertension with heart disease	39.6	38.1	44.2	45.4	47.7
Other diseases of heart	10.8	8.4	10.8	10.7	9.8
Hypertension without mention of heart	6.2	5.1	6.2	6.7	7.4
General arteriosclerosis	5.7	5.6	6.9	6.7	7.3
Nephritis and nephrosis	11.8	10.9	12.4	13.5	13.6
Pneumonia	12.5	11.9	19.1	19.8	18.8
Influenza	1.1	1.2	2.7	4.2	2.9
Ulcers of stomach and duodenum	4.7	4.5	4.7	4.6	4.6
Appendicitis	1.3	1.3	1.4	1.4	1.7
Hernia and intestinal obstruction	3.1	4.5	3.9	4.0	4.3
Gastritis, duodenitis, enteritis, etc.	2.7	2.4	3.0	2.7	2.9
Cirrhosis of liver	9.0	7.4	10.1	9.4	9.4
Complications of pregnancy, childbirth	1.4	1.2	1.4	1.4	1.7
Suicide	5.8	6.3	6.2	6.6	6.8
Homicide	2.3	2.9	2.5	2.6	2.8
Accidents—total	40.6	40.9	39.3	36.6	34.5
Motor vehicle	14.4	15.7	14.8	14.0	14.4
Home	4.8	5.8	7.2	7.8	7.9
Occupational (civilian)	3.8	3.7	3.6	3.6	3.2
War deaths—enemy action	1.5	5.5	2.3	6.7	.1
All other causes	70.1	68.1	74.3	68.7	66.9

*The rates for 1952 are provisional.

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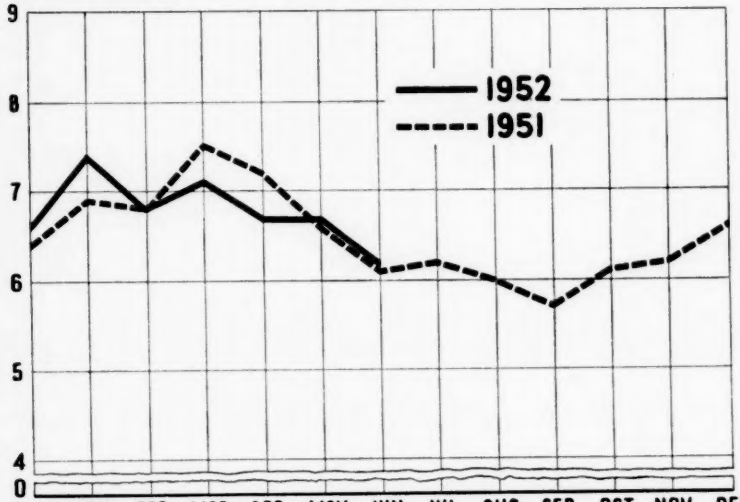
MORTALITY FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE COMPANY • INDUSTRIAL PREMIUM-PAYING BUSINESS
WEEKLY AND MONTHLY COMBINED

DEATH RATES PER 1,000 POLICYHOLDERS • ANNUAL BASIS



(DEC)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1951	6.9	6.8	7.5	7.2	6.6	6.1	6.2	6.0	5.7	6.1	6.2	6.6
1952	7.4	6.8	7.1	6.7	6.7	6.2						

1952 figures are provisional

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